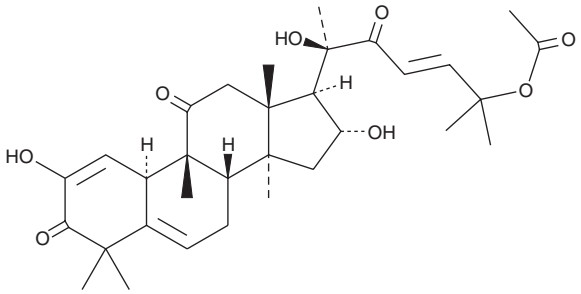
PRODUCT INFORMATION

Cucurbitacin E

Item No. 14821

CAS Registry No.: 18444-66-1
Formal Name: (9β,10α,16α,23E)-25-(acetyloxy)-2,16,20-trihydroxy-9-methyl-19-norlanosta-1,5,23-triene-3,11,22-trione
Synonyms: NSC 106399, NSC 521775
MF: $C_{32}H_{44}O_8$
FW: 556.7
Purity: ≥98%
UV/Vis.: λ_{max}: 234 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cucurbitacin E is supplied as a crystalline solid. A stock solution may be made by dissolving the cucurbitacin E in the solvent of choice, which should be purged with an inert gas. Cucurbitacin E is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of cucurbitacin E in these solvents is approximately 30 mg/ml.

Cucurbitacin E is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cucurbitacin E should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Cucurbitacin E has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cucurbitacin E is a plant-derived triterpene that has diverse biological activities. At a concentration of 10 pM, it reduces MPP^+-induced death of neuronal PC12 cells through inhibition of autophagy *in vitro*.[1] Cucurbitacin E inhibits growth of T24 bladder, MDA-MB-468 and MCF-7 breast, PC3 prostate, and colorectal cancer cell lines (IC_{50}s = 50-1,000 nM) through induction of G_2/M arrest and apoptosis.[2-4] It increases bilirubin binding to human serum albumin (HSA) in human plasma in a dose-dependent manner.[5] Cucurbitacin E also inhibits depolymerization of actin filaments isolated from rabbit skeletal muscle actin and in HeLa cells.[6]

References

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3. Kong, Y., Chen, J., Zhou, Z., *et al. PloS One* **9(7)**, e103760 (2014).
4. Huang, W.-W., Yang, Y.-S., Lin, M.-W., *et al. Evid. Based Complement. Altnernat. Med.* 952762 (2012).
5. Greige-Gerges, H., Abou Khalil, R., Chahine, R., *et al. Life Sci.* **80(6)**, 579-585 (2007).
6. Sörensen, P.M., Iacob, R.E., Fritzsche, M., *et al. ACS Chem Biol.* **7(9)**, 1502-1508 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM